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AMSAT NEWS SERVICE
ANS-365

ANS is a free, weekly, news and information service of AMSAT North America, The Radio Amateur Satellite Corporation. ANS reports on the activities of a worldwide group of Amateur Radio operators who share an active interest in designing, building, launching and communicating through analog and digital Amateur Radio satellites.

Please send any amateur satellite news or reports to:
ans-editor@amsat.org

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ANS-365 AMSAT News Service Weekly Bulletins

AMSAT News Service Bulletin 365.01
>From AMSAT HQ SILVER SPRING, MD.
December 30, 2012
To All RADIO AMATEURS
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Satellites Removed From Munitions List

Space Export Control Reform Passes House and Senate
by SpaceMart.com Staff Writers
Washington DC (SPX) Dec 27, 2012

Legislation reforming space-related export control has passed the House and the Senate and is expected to be signed by the President. The legislation is included in the National Defense Authorization Act for Fiscal Year 2013, under Sec. 1261, Removal of Satellites and Related Items from the United States Munitions List (USML).

The legislation contains restrictions, including prohibitions specific to China, North Korea, and any country that is a state sponsor of terrorism.

The passage of this legislation is significant and brings with it the promise that U.S. universities will be better supported in their mission to prepare the workforce needed to design and deploy the space systems of the future and enable the U.S. to remain a leader in space.

Current law had resulted in unintended, adverse impact on U.S. universities, from classroom teaching to student-built CubeSats. Dr. Frederick Tarantino, USRA President, said, "This new legislation strengthens U.S. national security and helps restore the crucial role of university research and education."

The legislation is consistent with the recommendation by the Departments of Defense and State, which, in consultation with the Department of Commerce and intelligence community, concluded in the Section 1248 Report that "Current law forces the U.S. government to continue to protect commonly available satellites and related items on the USML, thus impeding the U.S. ability to work with partners and putting U.S. manufacturers at a disadvantage, but providing no noticeable benefit to national security."

This action by the Congress follows years of effort by USRA's 105-member-university Council of Institutions to inform members of Congress and Administration officials on how appropriate reform will strengthen our national security, better enable U.S. research innovation, and support U.S. workforce development.

USRA joined with industry, including the Satellite Industry Association and the Commercial Spaceflight Federation, in strongly endorsing the Safeguarding United States Satellite Leadership and Security Act of 2012, sponsored by Sen. Michael Bennet (CO).

USRA also worked with the American Association of Universities (AAU) in bringing to the attention of the Congress and the Administration the chilling effect of current space export control on U.S. universities and U.S. students and the critical need for reform.

Professor Scott Pace, a USRA Trustee and Director of the Space Policy Institute of The George Washington University, said, "This is a long overdue change that restores accountability to the Executive Branch while maintaining Congressional oversight. Both sides of the aisle are to be congratulated for this successful outcome."

This report was orginally posted at SpaceMart.com:
http://tinyurl.com/Space-Export-Reform

[ANS thanks SpaceMart.com for the above information]

AMSAT SKN ON OSCAR 2013 In Memory of W1BIH/PJ9JT

You are cordially invited to participate in Straight Key Night on OSCAR 2013, conducted by AMSAT for all radio amateurs throughout the world. This year's event is dedicated to the memory of John Thompson, W1BIH/PJ9JT, who passed away in 2012, aged 96. Although known primarily as an HF DXer and contester, John was also active on OSCAR, mostly on CW.

As always, SKN on OSCAR is simple and informal. Just operate CW through one or more satellites on 1 January 2013 (0000 to 2400 UTC), using a straight hand key. There is no need to send in a log, but all participants are encouraged to nominate someone they worked for Best Fist. Your nominee need not have the best fist of anyone you heard, only of those you worked. Send your nomination to w2rs at amsat.org. A list of those nominated will appear in ANS and the AMSAT Journal.

[ANS thanks Ray Soifer, W2RS for the above information]

Activation of Mawson in Antarctica

Leaving soon on board the ice breaker Aurora Australis for the Australian Antarctic Territory station at Mawson is Craig Hayhow VK6JJJ, who will become VK0JJJ.

He lands on February the 10th, planning to soon after install the 6m beacon VK0RTM and test the propagation on that band.

The main HF rig is a FlexRadio Flex-5000A coupled to an amplifier and feeding a terminated sloping triangle antenna.

On 6m it will be at 400 watts from Mawson thanks to a power amplifier from Steve Gregory VK3ZAZ, who is also the QSL manager, and radiated by a 5-element yagi.

The amateur satellites on 2m and 70cm are to be accessed using a crossed duo-bander.

During the next 12 months Craig VK0JJJ is in Antarctica to work and amateur radio is his leisure time activity.

[ANS thanks Jim Linton VK3PC and the Southgate ARC for the above information]

Free CubeSat Workshop in Milton Keynes, England

The UK Space Agency will be running a free CubeSat Community Workshop at Milton Keynes on January 22 that will include discussion on plans for UKube-2.

Registration for the workshop is now open. This is a free event and is open to all, hosted by the Open University, Milton Keynes, on 22 January 2013. Please note that space is limited and places will be allocated on a first come, first serve basis.

The event will be an opportunity for the UK Space Agency to provide the cubesat community with an update on its pilot cubesat mission UKube-1, due for launch in early 2013, and to discuss the overall philosophy and timing for the proposed UKube-2 programme. Attendees will have the opportunity to provide input on the future direction of a proposed rolling national programme of cubesat missions.

Parallel breakout sessions will be held as detailed in the downloadable programme. These themes have been selected in response to the common issues raised by members of the community. The findings from each session will feed into a concluding discussion in which follow up actions will be identified.

A copy of the workshop program can be found on-line at:
http://tinyurl.com/UK-Cubesat-Workshop (bis.gov.uk)

UK Space Agency
http://www.bis.gov.uk/ukspaceagency

[ANS thanks Southgate for the above information]

SA AMSAT SPACE SYMPOSIUM - CALL FOR PAPERS

The 2013 SA AMSAT Space Symposium will be held on Saturday, 18 May 2013 at the Innovation Hub in Pretoria. This is the first call for papers. The theme of the symposium is "Satellites - the new Amateur Radio Frontier". If you are planning to present a paper, send a brief outline to saamsat@sarl.org.za by 31 January 2013. For full details and the various deadline dates visit http://www.amsatsa.org.za.

[ANS thanks AMSAT-SA for the above information]

New Satellite Launch Vehicle To Carry CubeSat Swarm in 2013

A report on the AMSAT-UK web says 2013 should see the first flight of a new satellite launch vehicle.
(See: http://www.uk.amsat.org/?p014)

Super Strypi, also known as SPARK (Space-borne Payload Assist Rocket - Kauai), has been developed by Sandia National Laboratories, the University of Hawaii and Aerojet. The rocket is based on an enlarged version of Sandia's Strypi sounding rocket.

The all solid fueled vehicle uses a GEM-46 (LEO-46) motor of Delta-2H heritage as first stage. A Orbus-7S (LEO-7) motor acts as second stage

and a Star-30BP (Spark-30) or an Orbus-1 (LEO-1) as third stage. It is spin and fin stabilized during fist stage burn and has attitude control for the two upper stages. The low cost rocket will be launched from a rail launcher and can put a payload of 250 kg into a 400 km sun-synchronous orbit.

The Super Strypi vehicle will be launched from a rail-launcher at Barking Sands, Kauai (Pacific Missile Range Facility) towards the end of 2013.

Super Strypi will be carrying a swarm of CubeSats, the Edison Demonstration of Smallsat Networks (EDSN). The CubeSats are an unusual size of 10 by 10 by 15 cm (1.5U) and weigh 2 kg. The EDSN swarm will demonstrate distributed, multipoint space weather measurement and are expected to operate for at least 60 days and have an orbit life-time of up to 4 years.

ORS Project - Super Strypi
http://www.govsupport.us/ORSSSEA/Documents/DEA.pdf

Operationally Responsive Space (ORS) Project - Super Strypi
http://www.govsupport.us/orsssea/

Gunter's Space Page 2013 http://space.skyrocket.de/doc_chr/lau2013.htm

[ANS thanks AMSAT-UK for the above information]

UKube-1 Signs up for Launch and Completes Thermal Vacuum Testing

AMSAT-UK published a report that UKube-1, the UK Space Agency's (UKSA) first satellite, has 'booked' its journey into space on a Russian Soyuz-2 rocket. The launch from Baikonur in Kazakhstan is expected to take place in March 2013. UKube-1 has also completed Thermal Vacuum Testing to verify the spacecraft operation in a simulated space environment.

UKube-1 will carry a set of AMSAT-UK FUNcube boards to provide a 435/145 MHz linear transponder and a 145.915 MHz BPSK telemetry beacon for educational outreach.

Payloads in UKube-1 include: the first GPS device aimed at measuring plasmaspheric space weather; a camera that will take images of the Earth, and test the effect of radiation on space hardware, using a new generation of imaging sensor; an experiment to demonstrate the feasibility of using cosmic radiation to improve the security of communications satellites and to flight test lower cost electronic systems; an advanced mission interface computer to enable serious number crunching on tiny spacecraft; a high rate S-Band transmitter and patch antenna; a payload made up of 5 experiments that UK students and the public can interact with. There is also an outreach payload that allows school children to interact with the spacecraft.

Read the full story, including photos on the AMSAT-UK web:
http://www.uk.amsat.org/?p977

[ANS thanks the AMSAT-UK for the above information]

Dooms Day Press Release

N0D – Special Event Station for the End of the World
Successful OSCAR Satellite Operation!

Houston, Texas December 27, 2012: The N0D team had a very successful operation celebrating the Mayan Calendar End of the World which some expected would occur on Dec 21, 2012. In celebration, experienced satellite operators Allen Mattis, N5AFV, and Andy MacAllister, W5ACM, operated special event station N0D on the available satellite passes from December 15th, 2012, through December 22nd, 2012.

A total of 142 satellite contacts were made, and 29 US states, Canada, Mexico, Cuba, Puerto Rico and Brazil were worked. A total of 53 contacts were made on FM satellite SO-50. On the linear satellites AO-07, FO-29 and VO-52 a total of 89 contacts were made using both SSB and CW. It was especially nice to work Paulo, PV8DX, and Hector, CO6CBF, with CW. A contact was also made with Mexican special event station 4A0MAYA also celebrating the Mayan Calendar event. The N0D team thanks the OSCAR satellite community for their patience and understanding during occasional periods of congestion on the satellites related to the N0D operation.

As part of the special event, the South Texas Balloon Launch Team launched the Doomsday Balloon, BLT-32 “To the End of the World and

Float", to prepare the world for its demise! The launch occurred at
2310 UTC on Saturday Dec 15th from Covey Trails Airport in Fulshear, Texas. BLT-32 was designed as a "floater" with hopes that it would
reach Europe. The balloon floated eastward for 450 miles and burst at an elevation of approximately 106,000 feet when the rising sun on the morning of Dec 16 th warmed the balloon causing the helium to expand. The balloon came down approximately 15 miles NNW of Pascagoula, MS and efforts have been successful to recover the instrument package.

N0D was also very active on the HF bands throughout the event and over 2,500 amateur radio contacts were made. All 50 US States and 54 DXCC countries were worked on the HF bands. N0D QSLs are available via KK5W (SASE required).

[ANS thanks Allen Mattis, N5AFV, for the above information]

Reminder -- AMSAT Receives $25,000 Matching Funds Challenge
This was announced in last week's ANS-258.

Now is the time to take advantage of this opportunity to double your donation.

There are several ways you can double your donation to keep Amateur Radio in Space:

- Members have received a form in the mail to fill out and return. Please do so today!

- Go the AMSAT Store and make a donation

- Donate via a PayPal donation sent to martha@amsat.org or click on our PayPal widget at http://www.amsat.org.

Your generous contribution to AMSAT to support AMSAT and Project Fox now will help ensure that our common dream of keeping amateur radio in space will, indeed, become a reality.

[ANS thanks the AMSAT Office for the above information]

Satellite Shorts From All Over

+ Listen for Wyatt, AC0RA operating mobile via satellites as he is on the road between Texas and Iowa this coming week.

+ Hudson Valley Satellite Nets
  The next Hudson Valley Satellite Net, #156, will be Thursday January 3rd 2013 at 8PM EST On the KC2DAA Repeater 146.970 -600KHz 100 Hz PL Echolink: N2EYH-L Node Number 429079 (Echolink is only active for the duration of the net)
  Subsequent nets for January will be held January 17th and 31st.
  More information at: http://www.hvsatcom.org
  (Stu, WA2BSS)

+ The SDR-Radio V2 software preview has been released. It includes
  support for FCD and FCR Pro+.
  See: http://v2.sdr-radio.com/Previews.aspx

+ In Series Five Episode Twenty-Six of the ICQ Amateur / Ham Radio
  Podcasts Martin M1MRB reviews the Raspberry Pi for Amateur Radio.
  http://tinyurl.com/ICQ-Podcasts-Pi

+ NASA has just released two free beautiful interactive ebooks, one
  about the discoveries of the Hubble Space Telescope, and another
  about the upcoming replacement for the Hubble, the James Webb Space
  Telescope. Each book features not just text, but galleries of
  images, videos, and interactive features that help explain the sci-
  ence and technology of each telescope. More details are at:
  http://www.oneminuteastronomer.com/7184/free-nasa-ebook/

+ Lectures on CubeSat Technology and Applications that will be held
  at von Karman Institute (Brussels, Belgium) on 29 Jan - 1 Feb 2013.
  There will be close to 20 lectures given by the worldwide experts
  of the field.Participation is limited to 100 persons. Please reg-
  ister at:
https://www.vki.ac.be/index.php?option=m_mad4joomla&jid=Itemid356

+ Photos showing the arrival of NASA'S TDRS-K Satellite the Kennedy
  Space Center have been posted at:
  http://www.americaspace.org/?p(778 TDRS-K is being prepared for
  a January launch atop a United Launch Alliance Atlas V rocket.

+ Photos of the Orion spacecraft crew cabin under construction at
  the Operations and Checkout Building (O & C) at the Kennedy Space
  Center are posted at: http://tinyurl.com/Orion-at-KSC
  (UniverseToday.com)

[ANS thanks the AMSAT-UK for the above information]

+ A multi-purpose portable satellite station
  Ivo Klinkert PA1IVO describes his relatively simple setup to work
  amateur radio low-earth orbit satellites.
  This is an expansion of his talk at the AMSAT-UK Colloquium that
  he re-wrote and had translated for the March 2012 AMSAT-DL Journal
  Read Ivo's article at
  http://ivok.home.xs4all.nl/pa1ivo/portable_satellite_setup.html

[ANS thanks Southgate ARC for the above information]

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In addition to regular membership, AMSAT offers membership in the
President's Club. Members of the President's Club, as sustaining
donors to AMSAT Project Funds, will be eligible to receive addi-
tional benefits. Application forms are available from the AMSAT
Office.

Primary and secondary school students are eligible for membership
at one-half the standard yearly rate. Post-secondary school students
enrolled in at least half time status shall be eligible for the stu-
dent rate for a maximum of 6 post-secondary years in this status.
Contact Martha at the AMSAT Office for additional student membership
information.

73,
This week's ANS Editor,
E.Mike McCardel, KC8YLD

kc8yld at amsat dot org